## Abstract

Analog circuits for providing one or more waveform parameters, e.g., the DC offset or average, of an analog input signal. Separate biasing is not necessarily required. Some embodiments comprise field-effect-transistors (FETs) configured in various diodeconnected configurations that take advantage of leakage currents through the FETs so that long resistors or large capacitors are not necessarily required. One embodiment comprises two diode-connected FETs to provide an unbiased DC offset voltage of an analog input signal.